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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,208	04/02/2001	James W. Herriot	9392-014-999	9866

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EXAMINER

JEANGLAUDE, JEAN BRUNER

ART UNIT PAPER NUMBER

2819

DATE MAILED: 01/03/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,208

Applicant(s)

HERRIOT ET AL.

Examiner

Jean B Jeanglaude

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04-02-01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Drawings

In figures 3, 4, the third processing element on the top row from left has no input.

In figure 4, the fourth processing element on top row from left has no output.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by McDonnell et al., "Evolving Recurrent Perceptrons For Time-Series Modeling", IEEE Transactions on Neural Networks, vol. 5, no. 1, pages 24 – 38.

3. Regarding claim 13, McDonnell et al. discloses on page 27 a method of developing a signal by using an evolutionary programming which comprises five steps. The first step in the evolutionary programming is to form (create) an initial population of agents $(P)=[x_0, x_1, x_2, \dots, x_{2N-1}]$ wherein each agent is represented by a number (N) of dimensional vector of parameters (X_i) . Also, in step one the constraints (X_{min}, X_{max}) are established by the user for each parameter (X_i) . In steps 2 and 3, each element or individual are evaluated based on the associated objective using the function $J_i = \Phi(x_i)$. $s.t. \Phi: R^n \rightarrow R$. In step 4, the offspring are generated $[x_N, \dots, x_{2N-1}]$ by adjusting (modifying) each element or parameter in parents (agents) according to the rule in step 4. In step 5, steps 2 to 4 are repeated until a criterion is met.

Allowable Subject Matter

4. Claims 1 – 12 are allowable.

5. The following is a statement of reasons for the indication of allowable subject matter: in combination with other limitations of the claims the prior arts made. Of record fail to suggest a two dimension array processing elements wherein each processing element in the interior of the array comprises a Boolean logic circuit that generates an output signal that is a Boolean function of two inputs; at least some of the processing elements in the interior of the array comprise circuitry for changing the magnitude of the output signal from the Boolean logic circuitry and for applying it to both outputs and a threshold circuitry for comparing signals on the two inputs with a threshold value and providing binary input signals to the Boolean logic circuitry having a first value if the signal on an input exceeds the threshold and a second value if the signal on the input does not exceed the threshold value.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bass et al. (US Patent Number 5,140,538) discloses a hybrid digital-analog computer parallel processor.

7. Mandl (US Patent Number 4,803,661) discloses a low power EPROM logic cell and logic arrays thereof.

8. Buckley (US Patent Number 5,940,529) discloses a self-organizing circuits.

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9. Gayles, E. S.; Owens, R.M.; Irwin, M. J. disclose "The MGAP-2: a micro-grained massively parallel array processor" in IEEE Transactions on ASIC Conference and Exhibit 18-22 Sept. 1995, pages 333 – 337.
10. McDonnell, J. R.; Waagen, D., disclose the "Evolving Recurrent Perceptrons For Time-Series Modeling" in IEEE Transactions on Neural Networks vol. 5, no. 1, pages 24 – 38.
11. Kawashima, T; Hashimaya, T.; Furuhashi, T; Okuma, S. disclose "A proposal of multi-agent type adaptive digital filter" in IEEE interim Conference on Systems, Man, and Cybernetics, vol. 3, pages 2338 – 2341, 11-14 Oct. 1998.
12. Kavaslar, F.; Guzelis, C. disclose the "Fundamental Theory and Application, A Computer-assisted investigation of a 2-D array of Chua's circuits" in IEEE Transactions on Circuits and System I, vol. 13, no. 10, pages 721 – 735, Oct. 1995.
13. Rao, S. S.; Ramasubrahmanyam, A.; Singh, A. disclose "Systems and Computers, Evolving IIR approximants for FIR digital filters" in the Twenty-Ninth Asilomar Conference on Signals, vol. 2, pages 976 – 979, 30 Oct. – 2 Nov. 1995.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Jeanglaude whose telephone number is 703-306-3405. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 703-305-3493. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

JB, JG

December 31, 2001

Jan Bruner Janstade